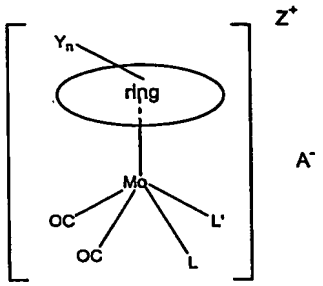
CLAIMS

What is claimed is:

1. A method for treating cancer in mammals consisting of a pharmaceutical composition, comprising an effective amount of an organometallic molybdenum (II) complex and a sterile non-toxic pharmaceutical acceptable vehicle therefor.

2. The method of claim 1 wherein, the organometallic molybdenum (II) complex is a compound of formula (I):



(I)

Wherein,

"ring" represents either cyclopentadienyl or indenyl;

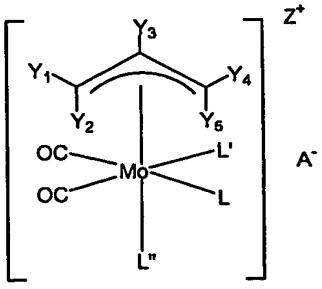
Y_n represents n substituents which can be chosen, independently, from H, alkyl, alkenyl, alkoxy, aryl, halogen, haloalkyl, amino, organosilane (SiR_3), CO_2R, C(O)R, $CHRCO_2R`$, CHROH, cyano or nitro;

L and L` represent either two independent monodentate ligands coordinated via C, N, O, P, S, halide donor atoms or one bidentate ligand with C, N, O, P or S donor atoms;

Z^+ represents the overall charge of the Mo (II) complex, usually 1^+ or 0;

A^- represents one suitable and pharmaceutically acceptable counter anion that equilibrate the complex charge when needed.

3. The method of claim 1 wherein, the molybdenum (II) complex is a compound of the general formula (III):



(II)

Wherein,

Y_1, Y_2, Y_3, Y_4, Y_5 represent n substituents which can be chosen, independently, from H, alkyl, alkenyl, alkoxy, aryl, halogen, haloalkyl, amino, organosilane (SiR_3), CO_2R, C(O)R, $CHRCO_2R`$, CHROH, cyano

or nitro;

L and L` represent either two independent monodentate ligands coordinated via C, N, O, P, S, halide donor atoms or one bidentate ligand with C, N, O, P or S donor atoms;

L`` represents one monodentate ligand coordinated via one C, N, O, P, S or halide donor atom;

Z^+ represents the overall charge of the Mo (II) complex, usually 1^+ or 0;

A^- represents one suitable and pharmaceutically acceptable counter anion that equilibrate the complex charge when needed.

4. A pharmaceutical composition according to claim 2 and 3 wherein, said pharmaceutical acceptable vehicle is selected from the group consisting of tablets, dragees, hard and soft gelatin capsules, dispersible powders and granules.

5. A pharmaceutical composition according to claim 2 and 3 wherein, said pharmaceutical acceptable vehicle is a physiological saline solution.

6. A pharmaceutical composition according to claim 2 and 3 wherein, said pharmaceutical acceptable vehicle is an isotonic sodium chloride solution.

7. A pharmaceutical composition according to claim 2 and 3 wherein, said pharmaceutical acceptable vehicle is an injectable vehicle.

8. A pharmaceutical composition according to claim 7 wherein, said injectable vehicle includes a physiological saline solution as the vehicle and dimethyl sulfoxide as a solubilizer.

9. A pharmaceutical composition according to claim 7 and further including a buffer.

10. A pharmaceutical composition according to claim 9, wherein, said buffer is sodium bicabornate or tris(hydroxymethyl)aminomethane.

11. A pharmaceutical composition according to claim 2 and 3 wherein, said pharmaceutical acceptable vehicle is an aqueous or oily suspension, emulsion, solution or syrup.

12. A liquid pharmaceutical composition according to claim 2 and 3 having pH of 4-7.

13. An injectable pharmaceutical composition according to claim 7 having a pH between 5.0 and 5.5.

14. A pharmaceutical composition according to claim 2 and 3 which contains an aqueous vehicle and a solubilizer.

15. A pharmaceutical composition according to claim 2 and 3 wherein, said composition is in the form of a suspension containing a liquid vehicle and a dispersing or wetting agent.

16. A pharmaceutical composition according to claim 2 and 3 wherein, said composition is in the form of an emulsion containing a liquid vehicle and an emulsifier.

17. A pharmaceutical composition according to claim 2 and 3 wherein, said composition is in the form of a water-dispersible powder or granule which contains said molybdenum (II) complex in a mixture with a dispersing, wetting or suspension agent.